

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) A method of animating fluid, comprising:
2 determining a fluid surface at a first time value according to a fluid simulation;
3 adding at least one spray particle beneath the fluid surface, the spray particle
4 having an initial state derived at least in part from the attributes of the fluid ~~surface~~
5 simulation; ~~and~~
6 moving the spray particle independently of the fluid simulation according to at
7 least its initial state.
8 rendering the fluid surface; and
9 rendering the spray particle in response to the spray particle being above the
10 fluid surface.
- 1 2. (Cancelled)
- 1 3. (Original) The method of claim 1, wherein determining a fluid surface
2 comprises:
3 solving a level set equation to determine a zero level corresponding to the
4 fluid surface.
- 1 4. (Original) The method of claim 3, wherein determining a fluid surface
2 further comprises:
3 simulating a set of fluid particles to determine a state of the set of fluid
4 particles at the first time value; and
5 solving the level set equation to determine the zero level using the state of the
6 set of fluid particles.
- 1 5. (Original) The method of claim 3, wherein adding at least one spray
2 particle comprises:
3 solving the level set equation to determine a non-zero level corresponding to a
4 boundary surface; and
5 adding the spray particle to a boundary region between the fluid surface and
6 the boundary surface.

1 6. (Original) The method of claim 1, wherein adding at least one spray
2 particle comprises adding the spray particle to a region within a specified depth from the fluid
3 surface.

1 7. (Currently Amended) The method of claim 1, wherein moving the
2 spray particle comprises moving the spray particle in accordance with a ballistic simulation
3 based upon at least the initial state of the spray particle.

1 8. (Original) The method of claim 7, wherein the ballistic simulation
2 includes an approximation of the force of gravity on the spray particle.

1 9. (Original) The method of claim 6, further comprising:
2 removing the spray particle in response to the spray particle being below the
3 specified depth from the fluid surface.

1 10. (Original) The method of claim 5, further comprising:
2 removing the spray particle in response to the spray particle being below the
3 boundary surface.

1 11. (Currently Amended) The method of claim 1, further comprising:
2 determining the fluid surface at a second time value according to the fluid
3 simulation;
4 adding at least one additional spray particle beneath the fluid surface, the
5 additional spray particle having an initial state derived at least in part from the attributes of
6 the fluid ~~surface~~simulation; and
7 moving the spray particle and the additional spray particle independently of
8 the fluid simulation according to at least their respective initial states.

1 12. (Currently Amended) A method of animating a fluid, comprising:
2 determining a state of a set of fluid particles at a first instance of time using a
3 fluid simulation;
4 defining a fluid surface from the state of the set of fluid particles;
5 defining a boundary region between the fluid surface and a specified depth
6 from the fluid surface;

7 adding a plurality of spray particles to the boundary region, wherein the
8 plurality of spray particles is assigned an initial state ~~based~~ derived at least in part from the
9 state of the set of fluid particles;

10 moving the plurality of spray particles independently of the fluid simulation
11 according to at least the initial state of the plurality of spray particles; ~~and~~

12 removing a portion of the plurality of spray particles in response to the portion
13 of the plurality of spray particles being located below the specified depth from the fluid
14 surface;

15 rendering the fluid surface; and

16 rendering a second portion of the plurality of spray particles.

1 13. (Cancelled)

1 14. (Currently Amended) The method of claim ~~13~~12, wherein the second
2 portion of the plurality of spray particles is located above the fluid surface.

1 15. (Original) The method of claim 12:

2 wherein determining the fluid surface comprises solving a level set equation
3 for a zero level corresponding to the fluid surface; and

4 wherein determining the boundary region comprises solving the level set
5 equation for a non-zero level corresponding to a surface at the specified depth from the fluid
6 surface.

1 16. (Original) The method of claim 12, wherein moving the plurality of
2 spray particles comprises:

3 moving the plurality of spray particles in accordance with a ballistic
4 simulation.

1 17. (Currently Amended) An information storage medium having a set of
2 instructions adapted to direct an information processing device to perform an operation
3 comprising the steps of:

4 determining a fluid surface at a first time value according to a fluid simulation;

5 adding at least one spray particle beneath the fluid surface, the spray particle
6 having an initial state derived at least in part from the attributes of the fluid ~~surface~~
7 simulation; and

8 moving the spray particle independently of the fluid simulation according to at
9 least its initial state;
10 rendering the fluid surface; and
11 rendering the spray particle in response to the spray particle being above the
12 fluid surface.

1 18. (Cancelled)

1 19. (Original) The information storage medium of claim 17, wherein
2 determining a fluid surface comprises:
3 solving a level set equation to determine a zero level corresponding to the
4 fluid surface.

1 20. (Original) The information storage medium of claim 19, wherein
2 determining a fluid surface further comprises:
3 simulating a set of fluid particles to determine a state of the set of fluid
4 particles at the first time value; and
5 solving the level set equation to determine the zero level using the state of the
6 set of fluid particles.

1 21. (Original) The information storage medium of claim 19, wherein
2 adding at least one spray particle comprises:
3 solving the level set equation to determine a non-zero level corresponding to a
4 boundary surface; and
5 adding the spray particle to a boundary region between the fluid surface and
6 the boundary surface.

1 22. (Original) The information storage medium of claim 17, wherein
2 adding at least one spray particle comprises adding the spray particle to a region within a
3 specified depth from the fluid surface.

1 23. (Currently Amended) The information storage medium of claim 17,
2 wherein moving the spray particle comprises moving the spray particle in accordance with a
3 ballistic simulation based upon at least the initial state of the spray particle.

1 24. (Original) The information storage medium of claim 23, wherein the
2 ballistic simulation includes an approximation of the force of gravity on the spray particle.

1 25. (Original) The information storage medium of claim 22, further
2 comprising:
3 removing the spray particle in response to the spray particle being below the
4 specified depth from the fluid surface.

1 26. (Original) The information storage medium of claim 21, further
2 comprising:
3 removing the spray particle in response to the spray particle being below the
4 boundary surface.

1 27. (Currently Amended) The information storage medium of claim 17,
2 further comprising:
3 determining the fluid surface at a second time value according to the fluid
4 simulation;
5 adding at least one additional spray particle beneath the fluid surface, the
6 additional spray particle having an initial state derived at least in part from the attributes of
7 the fluid ~~surface~~simulation; and
8 moving the spray particle and the additional spray particle according to at least
9 their respective states.

1 28. (Original) A tangible media including a first image including a fluid
2 surface and a spray particle each having a first state, and a consecutive image including the
3 fluid surface and the spray particle each having a second state, wherein the first and second
4 states of the spray particle are created according to the method of claim 1.

1 29. (Original) A tangible media including a first image including a fluid
2 surface and a plurality of spray particles each having a first state, and a consecutive image
3 including the fluid surface and the plurality of spray particles each having a second state,
4 wherein the first and second states of the plurality of spray particle are created according to
5 the method of claim 12.